Nikola Coleman

Nikola Coleman thinks experience she gained on ARS laboratory equipment has made her a better manager at Eli Lilly. Photo by Scott Bauer (K7378-11)

Lab Skills Are Highly Transferable

An intern had been trying for some time to pour a perfect gel for electrophoresis—a research tool that would allow her to use electric fields to explore cotton fiber DNA.

Mastering the task was an important milestone. It would allow her to work more independently, rather than just assist the researchers. But no matter how carefully the intern poured the gel solution through a narrow opening between two glass plates, no matter how tightly she placed the rubber holding seal, the solution leaked.

The intern worried that her mentor, plant physiologist Barbara Triplett, would lose faith. But Triplett seemed unconcerned. So the intern kept trying. And finally the gel set just right, causing a shout for joy.

It was one of many achievements Nikola Coleman accomplished while working for the Agricultural Research Service. Today, she is a pharmacist at Eli Lilly and Company, an Indiana pharmaceutical firm.

Her former mentor is now a friend.

Triplett, who works at ARS' Southern Regional Research Center in New Orleans, Louisiana, says any student who enjoys science should be encouraged to take internships. She cautions, however, that to succeed, they need determination. "As a scientist, you have to put up with a lot of frustration," says Triplett. "People who need instant gratification or lack confidence should look elsewhere."

Adds Coleman, "When I was learning to pour that gel, Barbara didn't give up and say, 'Forget it; I'll do it.' Her patience allowed me to get to a point where I could master the skill."

Today, some Eli Lilly researchers turn to Coleman for advice when they need federal clearance to market new drugs or to conduct clinical trials. She says her research background helps her understand and work with those colleagues. Without question, her ARS internship gave Coleman transferable skills.

For example, at SRRC, she used a spectrophotometer to track enzymes that regulate cotton fiber growth. Later, at Eli Lilly, Coleman used one to check the purity of pharmaceutical compounds. A spectrophotometer works by shining light through solutions. Compounds absorb parts of the light spectrum differently—making a kind of chemical fingerprint.

Triplett says showing novices—both students and teachers—how to use laboratory equipment helps her improve the clarity of instructions for other scientists.

"I think it makes me a better manager," she adds.

Coleman first worked at SRRC as a junior in high school. While she had other mentors, she says Triplett was great to work for, because she trusted her interns and varied their tasks so their jobs never got dull.

When Coleman began studies at Xavier University of Louisiana, Triplett hired her under a program that allowed her to work full time during the summer and 20 hours a week during school.

Coleman's mother had wanted her to be an engineer, but Nikola disliked physics and excelled in organic chemistry. Triplett helped her with calculus and gave advice on dealing with difficult professors. She also supported her outside the laboratory when, during her senior year of college, Coleman's grandmother died, and Triplett went to the funeral. Later, she attended Coleman's wedding.

"Barbara was like an older sister," says Coleman. "I remember in my senior year, we became more like colleagues, and I was proud of that."—By **Jill Lee,** ARS. ◆